

## Polyamines and their analogs in cancer and other diseases

### *Editorial*



Mammalian cells contain significant amounts of polyamines, which play different roles in various tissues. During the last two decades, considerable progress has been made in understanding their metabolic pathways and numerous enzymes involved in polyamines synthesis and degradation have been isolated and studied.

The physiological functions of these amines have not yet been elucidated completely at the molecular level. However, several studies have provided a better understanding of the role of polyamines in cell growth, proliferation and in pathophysiological processes. Special attention has been given to their contribution to carcinogenesis and to the development of new approaches to the therapy of cancer and of other diseases.

Several aspects concerning the physiological roles of polyamines are described in this issue by internationally recognized experts. These authors did not plan to publish a new textbook on this important subject, but they rather wish to dedicate their scientific contributions to the memory of Prof. Nikolaus Seiler, a prominent scientist in polyamine research.

Nikolaus Seiler was born in Budaörs, Hungary, in 1931 and moved to Germany after the war for studying at the

University of Würzburg. He held a Ph.D. in chemistry and developed his studies in biochemistry and neurochemistry. He worked at the Max Planck Institute in Frankfurt and later as Director of Basic Research at the Merrell Dow Center in Strasbourg. In 1967, he began active research at the Center and amongst his most important accomplishments was the synthesis of DFMO, under P. Bey. Prof. Seiler worked in several countries (Canada, France, The Netherlands) and was visiting professor at the University of Guelph (Canada), at the Hadassah Medical School, Jerusalem (Israel) and at the University of Rome "La Sapienza" (Italy).

Nikolaus Seiler was a great scientist and a hard worker who published some 380 scientific papers, involving several aspects of polyamines in physiological studies. The effect of polyamines depletion on cancer prevention and therapy, as well as his studies on polyamine functions and metabolism in the brain, represent his most important contribution to polyamines research. In addition, with the development of the dansyl technology, he introduced a new dimension to polyamine analysis. In recent years Prof. Seiler wrote several important reviews, such as "Thirty years of polyamine-related approaches to cancer therapy" and a review on "Polyamines and Apoptosis".

We all miss Nikolaus, but maintain his precious work that will remain an important guide for the many colleagues who shared with him the interest for the research on this subject, but mainly for the new generation involved with enthusiasm and productivity in the polyamine field.

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